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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/693,346
Filing Date: October 24, 2003
Appellant(s): ISLAM ET AL.

John J. Oskorep
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9/24/2008 appealing from the Office action mailed 3/19/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2004/0142693	Feder et al.	07-2004
WO 01/22764	Einola et al.	03-2001

2003/0114158	Soderbacka et al.	06-2003
6,047,183	Kingdon et al.	04-2000
2004/0097233	Pecen et al.	05-2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims: 1-39.

The final action dated 3/19/2008 has copied and updated below for clarification purposes only.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 - 5, 36, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Feder et al. (U.S. Application # 2004/0142693)** in view of **Einola et al. (International Publication # 01/22764)** and further in view of **Soderbacka et al. (USPN 2003/0114158)**. .

Consider **claim 1**, Feder et al. disclose a method of selecting a system (read as base station transceiver system; see abstract) in a mobile station comprising:

scanning the environment for available communication systems (read as base station transceiver system; see abstract) to provide service for the mobile station;

checking (read as identifying) each available system (read as base station transceiver system) detected in step S10 (see figure 2), to a list of allowable systems in the mobile client (read as mobile station; see [0020]) and determine if the systems are valid according to a Service Level Agreement or SLA from the primary service provider (read as identifying a base station that provides a predetermined service and by default identifying base station that fail to provide the predetermined service; [0020 - 0021]);
and

selecting a 3G system (read as first base transceiver station) over WLAN system (read as second base transceiver station) since SLA from the service provider prefers a

3G system (read as second base transceiver station fails to provide the predetermined service; [0052]). A preference level is set by the service provider, which prefers a 3G system (based on data rate, signal quality, etc.; see [0059 - 0068]) to any other system and is hereby construed as selecting a first base station since the second base station, i.e. WLAN system and station, fails to provide the 3G or greater service. In addition, Feder et al. further disclose a rule table (see [0073] and table 3) to store in the mobile client to select a system that is a 3G system (read as first system) when there is a choice between a 3G_{LOW} and an 802.11_{LOW} (read as second base station). For clarity, referring to paragraph [0062] if the E_c/I_o measurement is -9dB (read as better than a minimum threshold) for a 3G system (read as first base station) and -7dB for a 802.11 system (read as second base station) while being in the same range "LOW" a 3G system will be selected based on rule table 3 even though the signal quality is better for the 802.11 system (read as the first base station transceiver system has a signal quality that is greater than a minimum threshold, even if the signal quality is less than that of the second base station transceiver system).

However, Feder et al. fail to disclose second base station provides a communication service that is less than the 3G or greater communication service.

In the related field of endeavor, Einola discloses a GSM base station (read as second base station that fails to provide 3G or greater communication service) (see pg. 12, lines 19 - 21).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder et al. with the

teachings of Einola in order to assist the base station in the handover process and reduce the burden of processing at the mobile station.

However, Feder as modified by Einola discloses all the limitations including measuring a first and energy to interference ratio of the first and second transceiver system (see [0031; 0045]; fig. 1) but does not explicitly disclose a first and second cellular base station and a mobile telephone in cellular network.

In the related field of endeavor, Soderbacka discloses a mobile terminal (read as mobile telephone) identifying a 3G base station (read as first cellular base station) and a 2G base station (read as second cellular base station) (see fig. 1)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder and Einola with the teachings of Soderbacka in order to provide inter-system handover for a cellular network.

Consider **claim 2** as applied to claim 1, Feder et al. fail to disclose second base station transceiver system provides a second generation communication service.

In the related field of endeavor, Einola discloses GSM network (read as second base station that provides second generation service) (see pg. 12, lines 19 - 21).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder et al. with the teachings of Einola in order to assist the base station in the handover process and reduce the burden of processing at the mobile station.

Consider **claim 3** as applied to claim 1, Feder et al. disclose a set of ranges for E_c/I_o measurements (read as signal quality; [0059]) and based on the ranges, system (read base station) priorities are set as "High", "Medium", and "Low" (see [0059 - 0068]) and thus a system is selected (read base station). In addition, Feder et al. further disclose a rule table (see [0073] and table 3) to store in the mobile client to select a system that is a 3G system (read as first system) when there is a choice between a $3G_{LOW}$ and an 802.11_{LOW} (read as second base station). For clarity, referring to paragraph [0062] if the E_c/I_o measurement is -9dB (read as better than a minimum threshold) for a 3G system (read as first base station) and -7dB for a 802.11 system (read as second base station) while being in the same range "LOW" a 3G system will be selected based on rule table 3 even though the signal quality is better for the 802.11 system.

Consider **claims 4 and 5** as applied to claim 1, Feder et al. disclose that a user initially subscribes and then receives a preference rule update from the primary service provider (see [0054]). Therefore the mobile station could be subscribed to any system or network, e.g. a 3G network (read as 3G communication service) initially. Then once the preference rules are stored in the mobile station the mobile can connect to a 3G system (read as first base station), if not already in a 3G system, according to the rules in table 3 where a 3G system is selected even when the E_c/I_o measurement (read as signal quality) is better or worse than the initial system or network (read as second base station) (see [0059 - 0068] and table 3).

Consider **claims 36 and 38** as applied to claims 1 and 11, Feder discloses receiving, via the cellular RF transceiver, a message or parameters from the first and the second cellular base station transceiver systems which identify whether or not the first and the second cellular base station transceiver systems provide the 3G or greater communication service since a table is built at the mobile station as to what networks are available to the mobile station (see fig. 1).

However, Feder as modified by Einola does not explicitly disclose a mobile telephone and cellular base stations.

In the related field of endeavor, Soderbacka discloses a mobile terminal (read as mobile telephone) identifying a 3G base station (read as first cellular base station) and a 2G base station (read as second cellular base station) (see fig. 1)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder and Einola with the teachings of Soderbacka in order to provide inter-system handover for a cellular network.

Claims 6 - 8, 16, 28, 37 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Feder et al. (U.S. Application # 2004/0142693)** in view of **Kingdon et al. (6,047,183)** and further in view of **Soderbacka et al. (USPN 2003/0114158)**.

Consider **claim 6** as applied to claim 1, Feder et al. fail to disclose acts of producing and sending a list of one or more handoff candidate identifiers to a serving base station transceiver system which excludes an identifier for the second base station transceiver system.

In the related field of endeavor, Kingdon et al. disclose MS (200) produces and sends a list of cell identities (read as handoff candidate identifiers) with strongest signal strengths (read as including certain base station identifiers and inherently excluding certain identifiers based on the selection criteria or services provided) to BSC (240) (read as serving base station transceiver) (see col. 4, line 66 - col. 5, line 9). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder et al. with the teachings of Kingdon et al. in order to assist the base station in the handover process and reduce the burden of processing at the mobile station.

Consider **claim 7**, Feder et al. disclose a method of selecting a system (read as base station transceiver system; see abstract) in a mobile station comprising:

scanning the environment for available communication systems (read as base station transceiver system; see abstract) to provide service for the mobile station;

checking (read as identifying) each available system (read as base station transceiver system) detected in step S10 (see figure 2), to a list of allowable systems in the mobile client (read as mobile station; see [0020]) and determine if the systems are valid according to a Service Level Agreement or SLA from the primary service provider (read as identifying a base station that provide 3G or greater service and by default identifying base station that fail to provide the 3G or greater service; [0020 - 0021]).

Feder et al. fail to disclose producing and sending a list of one or more handoff candidate identifiers to a serving base station transceiver system which excludes an

identifier for at least one base station transceiver system based on its failure to provide the 3G or greater communication service.

In the related field of endeavor, Kingdon et al. disclose MS (200) produces and sends a list of cell identities (read as handoff candidate identifiers) with strongest signal strengths (read as including certain base station identifiers and inherently excluding certain identifiers based on the selection criteria or services provided) to BSC (240) (read as serving base station transceiver) (see col. 4, line 66 - col. 5, line 9).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder et al. with the teachings of Kingdon et al. in order to assist the base station in the handover process and reduce the burden of processing at the mobile station.

However, Feder as modified by Kingdon does not explicitly disclose first and second cellular base station providing a third generation or greater communication service and failing to provide a third generation or greater communication service, respectively.

In the related field of endeavor, Soderbacka discloses a 3G base station (read as first cellular base station providing a third generation or greater communication service) and a 2G base station (read as second cellular base station failing to provide a third generation or greater communication service) (see fig. 1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder and Kingdon with the

teachings of Soderbacka in order to provide inter-system handover for a cellular network.

Consider **claim 8** as applied to claim 7, Feder et al. that the SLA preference from the service provider prefers a 3G service (read as predetermined communication service; 0052]).

Consider **claims 16 and 28** as applied to claims 11 and 23, Feder et al. fail to disclose acts of producing and sending a list of one or more handoff candidate identifiers to a serving base station transceiver system which excludes an identifier for the second base station transceiver system.

In the related field of endeavor, Kingdon et al. disclose MS (200) produces and sends a list of cell identities (read as handoff candidate identifiers) with strongest signal strengths (read as including certain base station identifiers and inherently excluding certain identifiers based on the selection criteria or services provided) to BSC (240) (read as serving base station transceiver) (see col. 4, line 66 - col. 5, line 9).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder et al. with the teachings of Kingdon et al. in order to assist the base station in the handover process and reduce the burden of processing at the mobile station.

Consider **claims 37 and 39** as applied to claims 1 and 11, Feder discloses if the first energy-to-interference ratio E_c/I_o is less than the minimum threshold, causing the second cellular base station transceiver system to be selected for communication over the first cellular base station transceiver system; and allowing a call to be established,

via the cellular RF transceiver, through the selected first or second cellular base station transceiver system.

However, Feder as modified by Kingdon does not explicitly disclose establishing a voice call through cellular base station.

In the related field of endeavor, Soderbacka discloses a mobile terminal (read as mobile telephone) identifying a 3G base station (read as first cellular base station) and a 2G base station (read as second cellular base station) (see fig. 1)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder and Kingdon with the teachings of Soderbacka in order to provide inter-system handover for a cellular network.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Feder et al. (U.S. Application # 2004/0142693)** in view of **Kingdon et al. (6,047,183)** in view of **Soderbacka et al. (USPN 2003/0114158)** and further in view of **Einola et al. (International Publication # 01/22764)**.

Consider **claim 9** as applied to claim 7, Feder et al. as modified by Kingdon et al. fail to disclose the predetermined digital communication service comprises a Second Generation (2G) communication service.

In the related field of endeavor, Einola et al. disclose a GSM service (read as second-generation communication service; see pg. 11, lines 23 - 34).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder et al. and Kingdon et al. with the teachings of Einola et al. in order to provide handoff service to and from existing 2G service and not render the 2G wireless communication network obsolete which would be a waste of resources.

Consider **claim 10** as applied to claim 7, Feder et al. as modified above fail to disclose that the list is sent as part of one of an origination message, a page response message, and a pilot strength measurement message.

In the related field of endeavor, Einola et al. disclose CLASSMARK UPDATE message (read as one of origination message or page response message; see pg. 12, lines 21 - 26).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder et al. as modified above with the teachings of Einola et al. in order to use an existing technique to conserve resources.

Claims 11 - 15, 17, 23 - 27, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Feder et al. (U.S. Application # 2004/0142693)** in view of **Einola et al. (International Publication # 01/22764)** and further in view of **Pecen et al. (U.S. Publication # 2004/0097233)** and further in view of **Soderbacka et al. (USPN 2003/0114158)**.

Consider **claims 11 and 23** Feder et al. disclose a method of selecting a system (read as base station transceiver system; see abstract and figure 1) in a mobile station comprising:

scanning the environment for available communication systems (read as base station transceiver system; see abstract) to provide service for the mobile station;

checking (read as identifying) each available system (read as base station transceiver system) detected in step S10 (see figure 2), to a list of allowable systems in the mobile client (read as mobile station; see [0020]) and determine if the systems are valid according to a Service Level Agreement or SLA from the primary service provider (read as identifying a base station that provides a predetermined service and by default identifying base station that fail to provide the predetermined service; [0020 - 0021]);
and

selecting a 3G system (read as first base transceiver station that provides a third generation or greater communication service) over WLAN system (read as second base transceiver station that fails to provide 3G or greater communication service) since SLA from the service provider prefers a 3G system (read as second base transceiver station fails to provide the predetermined service; [0052]). A preference level is set by the service provider, which prefers a 3G system (based on data rate, signal quality, etc.; see [0059 - 0068]) to any other system and is hereby construed as selecting a first base station since the second base station fails to provide the predetermined service.

However, Feder et al. fail to disclose second base station provides a communication service that is less than the 3G or greater communication service.

In the related field of endeavor, Einola discloses a GSM base station (read as second base station that fails to provide 3G or greater communication service) (see pg. 12, lines 19 - 21).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder et al. with the teachings of Einola in order to assist the base station in the handover process and reduce the burden of processing at the mobile station.

Feder et al. as modified by Einola et al. fail to disclose a controller, radio frequency (RF) transceiver circuitry coupled to the controller, the RF transceiver circuitry including a receiver and a transmitter, and the mobile station using the controller and the RF transceiver circuitry to select a base station transceiver system for communication.

In the related field of endeavor, Pecan et al. disclose a mobile station in a wireless communication system comprising a controller (206) and an RF transceiver (204) in the mobile station (see figure 2) to control the selection of a cell (see abstract).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder et al. and Einola et al. with the teachings of Pecan et al. in order to provide a hardware system to carry out the method.

However, Feder as modified above discloses all the limitations including measuring a first and energy to interference ratio of the first and second transceiver

system (see [0031; 0045]; fig. 1) but does not explicitly disclose a first and second cellular base station and a mobile telephone in cellular network.

In the related field of endeavor, Soderbacka discloses a mobile terminal (read as mobile telephone) identifying a 3G base station (read as first cellular base station) and a 2G base station (read as second cellular base station) (see fig. 1)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder as modified above with the teachings of Soderbacka in order to provide inter-system handover for a cellular network.

Consider **claims 12 and 24** as applied to claims 11 and 23, Feder et al. fail to disclose second base station transceiver system provides a second generation communication service.

In the related field of endeavor, Einola discloses GSM network (read as second base station that provides second generation service) (see pg. 12, lines 19 - 21).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder et al. with the teachings of Einola in order to assist the base station in the handover process and reduce the burden of processing at the mobile station.

Consider **claims 13 and 25** as applied to claims 11 and 25, Feder et al. disclose a set of ranges for E_p/I_o measurements (read as signal quality; [0059]) and based on the ranges, system (read base station) priorities are set as "High", "Medium", and "Low" (see [0059 - 0068]) and thus a system is selected (read base station). In addition, Feder

et al. further disclose a rule table (see [0073] and table 3) to store in the mobile client to select a system that is a 3G system (read as first system) when there is a choice between a 3G_{LOW} and an 802.11_{LOW} (read as second base station). For clarity, referring to paragraph [0062] if the E_c/I_o measurement is -9dB (read as better than a minimum threshold) for a 3G system (read as first base station) and -7dB for a 802.11 system (read as second base station) while being in the same range, "LOW", according to paragraph [0062], a 3G system will be selected based on rule table 3 even though the signal quality is better for the 802.11 system.

Consider **claims 14 - 15 and 26 - 27** as applied to claims 11 and 23, Feder et al. disclose that a user initially subscribes and then receives a preference rule update from the primary service provider (see [0054]). Therefore the mobile station could be subscribed to any system or network, 3G (first base station) or 802.11 (second base station) (also read as predetermined service) initially. Then, once the preference rules are stored in the mobile station the mobile can connect to a 3G system (read as first base station) according to the rules in table 3 where a 3G system is selected even when the E_c/I_o measurement (read as signal quality) can be better or worse than the initial system or network (see [0059 - 0068] and table 3).

Consider **claims 17 and 29** as applied to claims 11 and 23, Feder et al. disclose various 3G systems including cdma2000 (see [0016]).

Claims 18 - 22 and 30 - 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Feder et al. (U.S. Application # 2004/0142693)** in view of **Kingdon**

et al. (U.S. Patent # 6,047,183) in view of Pecen et al. (U.S. Publication # 2004/0097233) and further in view of Soderbacka et al. (USPN 2003/0114158). .

Consider **claims 18 and 30**, Feder et al. disclose a method of selecting a system (read as base station transceiver system; see abstract) in a mobile station comprising:

scanning the environment for available communication systems (read as base station transceiver system; see abstract) to provide service for the mobile station;

checking (read as identifying) each available system (read as base station transceiver system) detected in step S10 (see figure 2), to a list of allowable systems in the mobile client (read as mobile station; see [0020]) and determine if the systems are valid according to a Service Level Agreement or SLA from the primary service provider (read as identifying a base station that provides a predetermined service and by default identifying base station that fail to provide 3G or greater service; [0020 - 0021]).

Feder et al. fail to disclose producing and sending a list of one or more handoff candidate identifiers to a serving base station transceiver system which excludes an identifier for at least one base station transceiver system based on its failure to provide the 3G or greater communication service.

In the related field of endeavor, Kingdon et al. disclose MS (200) produces and sends a list of cell identities (read as handoff candidate identifiers) with strongest signal strengths (read as including certain base station identifiers and inherently excluding certain identifiers based on the selection criteria or services provided) to BSC (240) (read as serving base station transceiver) (see col. 4, line 66 - col. 5, line 9).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder et al. with the teachings of Kingdon et al. in order to assist the base station in the handover process and reduce the burden of processing at the mobile station.

Feder et al. as modified above fail to disclose a controller, radio frequency (RF) transceiver circuitry coupled to the controller, the RF transceiver circuitry including a receiver and a transmitter, and the mobile station using the controller and the RF transceiver circuitry to select a base station transceiver system for communication.

In the related field of endeavor, Pecan et al. disclose a controller (206) and an RF transceiver (204) in the mobile station (see figure 2) to control the selection of a cell (see abstract).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder et al. as modified above with the teachings of Pecan et al. in order to provide a hardware system to carry out the method.

However, Feder as modified above does not explicitly disclose first and second cellular base station providing a third generation or greater communication service and failing to provide a third generation or greater communication service, respectively.

In the related field of endeavor, Soderbacka discloses a 3G base station (read as first cellular base station providing a third generation or greater communication service)

and a 2G base station (read as second cellular base station failing to provide a third generation or greater communication service) (see fig. 1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder as modified above with the teachings of Soderbacka in order to provide inter-system handover for a cellular network.

Consider **claims 19 and 31** and as applied to claims 18 and 30, Feder et al. that the SLA preference from the service provider prefers a 3G service (read as predetermined communication service; 0052]).

Consider **claims 20 and 32** as applied to claims 18 and 30, Feder et al. as modified above fail to disclose the predetermined digital communication service comprises a Second Generation (2G) communication service.

In the related field of endeavor, Einola et al. disclose a GSM service (read as second-generation communication service; see pg. 11, lines 23 - 34).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder et al. as modified above with the teachings of Einola et al. in order to provide handoff service to and from existing 2G infrastructure and not render the 2G wireless communication network obsolete which would be a waste of resources.

Consider **claims 21 and 33** as applied to claims 18 and 30, Feder et al. as modified above fail to disclose that the list is sent as part of one of an origination message, a page response message, and a pilot strength measurement message.

In the related field of endeavor, Einola et al. disclose CLASSMARK UPDATE message (read as one of origination message or page response message; see pg. 12, lines 21 - 26).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder et al. as modified above with the teachings of Einola et al. in order to use an existing technique to conserve resources.

Consider **claims 22 and 34** as applied to claims 18 and 30, Feder et al. disclose various 3G systems including cdma2000 (see [0016]).

Consider **claim 35** as applied to claim 30, Feder et al. as modified above to disclose that serving base station transceiver system utilizes the list of one or more handoff candidate identifiers to select one of the base station transceiver systems for communication with the mobile station.

In the related field of endeavor, Einola et al. disclose the BSC (18) utilizes the CLASSMARK UPDATE message (read as list) when a handover is deemed necessary and it sends a HARD HANDOVER message containing the UMTS AN CM information (read as identifiers) to the MSC (20) (see pg. 12, line 8 - pg. 13, line 29).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Feder et al. as modified above with the teachings of Einola et al. in order to use an existing technique to conserve resources.

(10) Response to Argument

Summary of Background of Technology:

The invention is with regards to handoff or handover and in particular a mobile assisted handoff. Essentially, when a cell phone/mobile is in a handoff condition it is able to receive signals from multiple base stations in the geographic region. The cell phone monitors/scans all the received signals from the different base stations in the area and decides upon the best. The cell phone compares the received signal strength or even any other quality metric known in the art, e.g., SIR, CIR, SNR, SNIR, etc. with an preset or predetermined threshold. Once the comparisons are made the base stations above the threshold are stored in a list at the mobile. In addition, the base stations are ranked according to their quality metric and the list is sent to the currently serving base station to assist in handoff from a currently serving base station to a target base station.

Appellant's argument in the Appeal Brief:

Claims 1-6,11-17, 23-29, and 36-37,

With regards to argument presented on pg 7, section I A, appellant asserts that Feder does not teach first and second cellular base station with first and second Ec/Io measurements and is directed towards selecting a heterogeneous wireless network and these different types of networks have different radio interfaces and require different types of signal processing. Further the appellant asserts, on pgs. 9-10, that the

examiner appears to use his own personal insight or knowledge to make up for the deficiencies in the prior art.

Examiner respectfully disagrees.

Feder discloses selecting and handing off of communication based not only on signal quality, but also based on the type of communication network based on either user or service provider preference, according to the quality of service provided, e.g. better, sir, snr, Ec/Io, data rate, etc. Feder also discloses in paragraph 0017 that the invention allows for switching between cellular networks, i.e., plural cellular base stations. It is true that networks disclosed by Feder are not exclusively cellular or homogeneous networks, but it would be obvious to apply the same concept to a homogeneous system/networks comprising only cellular based technology. For example, where both a new cellular network and a legacy cellular network are deployed, in light of Feder one would choose the new cellular network even though the signal quality is better than the legacy cellular network in order provide better quality of service, such as better, bandwidth, data rate, etc. Furthermore, Einola discloses on pg. 3, lines 15-18, switching between a GSM network (read as a 2G or fails to provide 3G service) and a UMTS network (read as 3G or provides 3G service). Therefore, in light of Feder, who defines several preferences in network selection including selecting a 3G network over any other network (e.g., 802.11 network) and Einola that discloses handoff between a 2G and 3G network, one of ordinary skill in the art would easily be able to combine the preference technique of Feder with handoff technique of Einola in order to provide the best quality of service possible to the user.

Finally, the technique of soft handoff is not entirely unique to a given system either homogeneous or heterogeneous. Therefore, when one of ordinary skill in the art is presented with a homogeneous communication system they would make the same quality metric measurements for all the base stations whether it is snr or Ec/Io. In addition, a conversion from one to the other is also readily achievable and is known to one of ordinary skill. Therefore, techniques from one system to another can easily be mapped by one of ordinary skill in the art.

With regards to argument presented on pg. 10, section I B, appellant asserts that Feder selects the 3G network only if it has a greater signal quality than the other network (see appeal brief pg .14).

Examiner respectfully disagrees.

The above read by the appellant of Feder is a very narrow read and in fact Feder goes beyond what is disclosed above. Feder explicitly discloses in paragraph 0058 if both a 3G system and an 802.11 system is available, the 3G system is given preference, **meaning a 3G system would be selected**. Similarly, a preference can be set such that an 802.11 is given preference in the presence of a 3G system (see [0069-0070]). So it is clear according to Feder, that a preference of one network over the other is **purely subjective** and can be defined by the user or the service provider.

Further with regards to example 3 and table 3 and paragraphs 0059-0063 of Feder, it is clear that when there is a choice between 3G medium and 802.11 medium, a 3G system is selected since the quality metric as provided in paragraphs 0060-0063 are "ranges". Therefore, a medium 3G can be -7dB and a medium 802.11 can be -4dB

and in this case according to the preference rules in table 3, a **3G system would be selected even though the quality for the 802.11 system is better**. Furthermore, in paragraph 0094, Feder discloses a preference can cause a 3G system to be selected when conditions are **roughly equivalent**. Therefore, in this case **roughly equivalent** is "lower or higher" and according to the preference rule one system would be preferred over the other.

With regards to argument presented on pg. 15, section II A, appellant asserts that there is no reason and motivation to modify or combine Feder, since Feder is directed to a laptop and data centric network to provide only data services. Meanwhile, the present invention is directed to voice and data services in a cellular network.

Examiner respectfully disagrees.

Feder discloses a PDA and laptop computer as examples of a mobile station or client (see [0002;0011]). In addition, the advancement and capabilities of mobiles devices has increased so much that there is no clear line to discern between a cell phone and a laptop. The two are synonymous considering the capabilities of the cell phone that are known in the art, they can perform most of the function done by laptops and vice-a-versa.

In response to applicant's argument that it is not obvious to combine, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the

test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the suggestion is to provide the best quality of service available according to the user preference.

Claims 7-10, 18-22, 30-35, and 38-39.

With regards to argument presented on pg. 20, section III A, appellant asserts that none of the prior arts teach identifying at the mobile a first and second cellular base station providing or failing to provide a 3G or greater service.

Examiner respectfully disagrees.

Feder discloses identifying the base stations **since they are being selected** and thus they are at least being identified before selection. Please see response above.

With regards to argument presented on pg. 22, section III B, appellant asserts that Kingdon does not teach producing and sending a list of identifiers which excludes certain identifiers based on the selection criteria of services provided. Further, on pg.

24, appellant asserts that it is too late to provide an obviousness argument in the advisory action.

Examiner respectfully disagrees.

Feder discloses preference and rules in the selection of a network for handoff, where one network would be preferred over the other (see [0058-0063; 0094]; example 3, table 3). At the same time, Kingdon discloses in col. 4, line 66 - col. 5, line 9, producing and sending a list of six cell identities from a plurality of cell identities based on signal strength, thereby effectively excluding certain cell identifiers.

Therefore, it would be obvious in view of Feder and Kingdon and the above know facts to produce and send a list of handoff candidate identifiers that excludes an identifier of an 802.11 network or *a network that fails to provide 3G or greater service* in the presence of 3G network since it is not a preferred network according to the preference and rules of Feder. Therefore, a mobile would not be handed off to a network that is not desired by the user or the service provider due to quality of service and no unnecessary data would be communicated.

Furthermore, it is not too late to show obviousness since an obviousness rejection always existed since the Final Office Action. The examiner is merely clarifying his stance and no new grounds of rejection have been raised.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Art Unit: 2618

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Fayyaz Alam/

Examiner, Art Unit 2618

Conferees:

/Edward Urban/

Supervisory Patent Examiner, Art Unit 2618

/Matthew D. Anderson/

Supervisory Patent Examiner, Art Unit 2618